



State of New Hampshire  
DEPARTMENT OF ENVIRONMENTAL SERVICES

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095  
(603) 271-3406 FAX (603) 271-7894



July 5, 2001

**Letter of Deficiency**  
DAM #148.13

Mr. Tom Craven  
Portsmouth Water Works  
680 Peverly Hill Road  
Portsmouth, NH 03801-5356

RE: Bellamy Reservoir Dam, Madbury

Dear Mr. Craven:

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that plays a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 502.02, an inspection of the subject dam was conducted on April 20, 2001. During this visual inspection and/or file review, the following deficiencies were observed:

- 1 The downstream face of the left embankment showed evidence of erosion. Mr. Craven claimed this area would be re-vegetated;
2. Catwalk railings and steel ladders on the bridge deck need painting;
- 3 The riprap on the upstream face of the left embankment was undersize. Larger size riprap will be added to the upstream side;
4. Concrete deterioration was observed along the construction joints of the left and right spillway abutment walls;
- 5 There was erosion noted along the upstream face of the left embankment adjacent to the left concrete training wall;
6. Leakage was noted from the ledge interface with the right concrete abutment wall;
7. Active leakage and discoloration was observed on C.J. #4 of monolith 7 and seepage was noted at the toe of the left embankment;
8. An increase since 1979 in efflorescence was visible along the construction joint of the right abutment wall at C.J. #1 & 2 of monolith 12, on C.J. #1 of monoliths 3 and 2, and along the left abutment wall;
9. Small crack found on C.J. #4, between monoliths 9 and 10; and

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10. There were minor brush and tress on the left embankment; these will be removed next year.

DES believes that the above deficiencies can be corrected by performing the following items by the indicated schedule:

**September 1, 2001:**

1. Re-vegetate the downstream face of the left embankment;
2. Paint catwalk railings and ladder;
- 3 Add large rip-rap to upstream face of the left embankment;
4. Repair the concrete deterioration along the construction joints of the left and right spillway abutment walls;
5. Repair erosion on the left upstream embankment;

**September 1, 2002:**

6. Remove the minor brush and trees on the left embankment;

**On a Continuing Basis:**

7. Monitor leakage located at the ledge interface at the toe of the right concrete abutment wall and on C.J. #4 of monolith 7;
8. Monitor seepage located at the toe of the left embankment; and
9. Monitor the areas of noted efflorescence, seepage and spillway leakage by measuring the length, depth, and width of cracks and the aerial extent of efflorescence.

DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. We have enclosed a self addressed stamped envelope for you to return this form.

Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

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If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406, or write to the Water Division at the address listed on the top of the first page.

Sincerely,

**COPY**  
*Amy C. Clark*

Amy C. Clark  
Dam Safety Engineer

Attachments DB8, DB13

cc: Gretchen Rule

Town of Madbury

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